

CLAIMS

1 1. A computer-implemented method for managing assets on plural Web servers,
2 comprising the acts of:
3 crawling the Web servers to identify assets and hyperlinks therein;
4 storing data representative of the assets and hyperlinks in a database; and
5 using the database, ensuring that when a user browser selects a hyperlink represented
6 in the database, the user is not presented with a "file not found" message.

1 2. The method of Claim 1, further comprising the acts of:
2 determining that any hyperlink is a broken hyperlink when the hyperlink points to an
3 asset not represented in the database;
4 undertaking action to address broken hyperlinks, the integrity of the hyperlinks being
5 preserved once the hyperlinks are addressed.

1 3. The method of Claim 2, wherein the undertaking act includes modifying an asset on
2 the Web server or adding an asset to the Web server such that when a user browser selects a
3 hyperlink in an asset on one of the Web servers, the user is not presented with a "file not found"
4 message.

1 4. The method of Claim 1, wherein the using act further includes:
2 linking the data representative of the assets and hyperlinks resident in the database to
3 the corresponding assets on the Web servers.

1 5. The method of Claim 4, further comprising the acts of:
2 determining that a user is attempting to create a new asset on one of the Web servers;
3 receiving the new asset;
4 copying the new asset to a Web server;
5 crawling the new asset to identify assets and hyperlinks therein; and
6 storing data representative of the assets and hyperlinks in the database.

1 6. The method of Claim 4, further comprising the acts of:
2 determining that a user is attempting to modify an existing asset in one of the Web
3 servers;
4 unlinking the existing asset from the database;
5 allowing the user to update the existing asset to render a modified asset, a copy of the
6 existing asset being retained;
7 crawling the modified asset to identify assets and hyperlinks therein;
8 storing data representative of the assets and hyperlinks of the modified asset in the
9 database; and
10 relinking the modified asset and existing asset with the database.

11 7. A computer system for managing assets in a data repository such as at least one Web
12 server or at least one file system, comprising:

13 computer readable code means for identifying the assets and for identifying reference
14 pointers in the assets to other assets in the data repository;

15 computer readable code means for determining that a reference pointer is a broken
16 reference pointer when the reference pointer refers to an asset not present in the data
17 repository, such that a system manager can address the broken reference pointers.

18 8. The system of Claim 7, wherein broken reference pointers are addressed using
19 computer readable code means such that subsequent computer-based selections of the reference
20 pointers are not possible or, if possible, do not result in "file not found" messages.

21 9. The system of Claim 7, wherein the data repository includes at least one file system
22 or at least two Web servers, and the system further comprises:

23 computer readable code means for linking the assets to a database containing metadata
24 representative of the assets and reference pointers, such that backups of the database
25 automatically cause the associated assets to be backed up on the file system or Web servers.

10. The system of Claim 9, further comprising:
computer readable code means for determining that a user is attempting to create a new asset on one of the Web servers;
computer readable code means for receiving the new asset;
computer readable code means for copying the new asset to a Web server;
computer readable code means for crawling the new asset to identify assets and hyperlinks therein; and
computer readable code means for storing data representative of the assets and hyperlinks in the database.

11. The method of Claim 10, further comprising:
computer readable code means for determining that a user is attempting to modify an existing asset in one of the Web servers;
computer readable code means for unlinking the asset from the database;
computer readable code means for allowing the user to update the asset to render a modified asset;
computer readable code means for crawling the modified asset to identify assets and hyperlinks therein;
computer readable code means for storing data representative of the assets and hyperlinks of the modified asset in the database; and
computer readable code means for relinking the database with the modified asset.

12. A computer program product including at least one program of instructions readable by a Web server to undertake method acts comprising:
crawling the Web server to identify assets and hyperlinks therein;
sending metadata representative of the assets and hyperlinks to a database, whereby when a user browser selects a hyperlink represented in the database, the user is never presented with a "file not found" message.

13. The computer program product of Claim 12, wherein the method acts further comprise:

2 determining that a user is attempting to create a new asset the Web server;
3 receiving the new asset;
4 copying the new asset to a Web server;
5 crawling the new asset to identify assets and hyperlinks therein; and
6 storing metadata representative of the assets and hyperlinks in the database.

1 14. The computer program product of Claim 13, wherein the method acts further comprise:
2 determining that a user is attempting to modify an existing asset in the Web server,
3 such that the asset can be unlinked from the database in response;
4 allowing the user to update the asset to render a modified asset;
5 crawling the modified asset to identify assets and hyperlinks therein;
6 sending metadata representative of the assets and hyperlinks of the modified asset in
7 the database, such that the database can be relinked with the modified asset.

1 15. A computer program product including a program of instructions to undertake method
2 acts comprising:

3 receiving, in a database, data representative of assets and hyperlinks from plural Web
4 servers;

5 maintaining the database such that when a user browser selects a hyperlink represented
6 in the database, the user is never presented with a "file not found" message.

1 16. The computer program product of Claim 15, wherein the method acts further comprise:
2 determining whether any hyperlink is a broken hyperlink when the hyperlink points
3 to an asset not represented in the database; and
4 facilitating action to address broken hyperlinks.

1 17. The computer program product of Claim 15, wherein the method acts further include:
2 linking the data representative of the assets and hyperlinks resident in the database to
3 the corresponding assets on the Web servers.

18. The method of Claim 1, wherein the database is remote from the Web servers.

19. The method of Claim 1, further comprising automatically backing up the assets and hyperlinks when the database is backed up.

20. The method of Claim 19, further comprising automatically recovering backed up assets and hyperlinks to their respective Web servers when the database is recovered.